

TWO NEW COMBINATIONS IN *BACCHARIS* (ASTERACEAE: ASTEREAEE)

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ABSTRACT

The newly proposed genus *Lanugothammus* Deble is considered a synonym of *Baccharis*, since phylogenetic data strongly support the monophyly of *Baccharis* sensu lato and reject the current circumscription of *Baccharis* subg. *Tarchonanthoides*, on which the circumscription of the new genus is based. Two new combinations are proposed: *Baccharis anabelae* (Deble) G. Heiden and *Baccharis pluricapitulata* (Deble) G. Heiden, based on taxa originally described in *Lanugothammus*.

KEY WORDS: Baccharidinae, Compositae, new combinations, nomenclature

Baccharis L. comprises between 338 and 400 species occurring from the USA to southern Argentina and Chile (Bremer 1994; Müller 2006) and is characterized by the usually tufted indumentum of the leaves and stems and the common occurrence of dioecy (Müller 2006). Heering (1904) published the first subgeneric classification of *Baccharis* and included the subgenera *Baccharis*, *Molina* (Pers.) Heering, *Pteronioides* Heering, *Stephananthus* Heering, and *Tarchonanthoides* Heering.

The genus has been subject of recent alterations in its circumscription. Hellwig (1993) proposed segregate *Neomolina* F.H. Hellw. and *Pingraea* Cass. from *Baccharis* and suggested that the species he included in the informal group “Lanugobaccharis” should be considered equivalent to a genus as well. On the other hand, broader circumscriptions of *Baccharis* were proposed by Nesom (1988) and Müller (2006) with the merging of monoecious (*Baccharidastrum* Cabrera), gynodioecious (*Heterothalamus* Less.), and polygamous taxa (*Baccharidiopsis* G.M. Barroso).

The most recent proposal for subgeneric classification of *Baccharis* was published by Müller (2006), who assumed as starting point the infrageneric taxa of Nesom (1990) and the genera segregated by Hellwig (1993), accepting four out of five subgenera established by Heering (1904). In his scheme, Müller (2006) accepted the subgenera *Baccharis*, *Molina*, *Pteronioides*, and *Tarchonanthoides*.

Müller (2006) considered *Baccharis* subg. *Tarchonanthoides* as the most consistently circumscribed subgenus of *Baccharis* and Heiden and Pirani (2012a, b) published a new species and taxonomic synopsis for the subgenus. Deble (2012) segregated *Baccharis* subg. *Tarchonanthoides* sensu Müller (2006) into the new genus *Lanugothammus* Deble, proposing 19 new combinations and describing two new species.

A phylogenetic analysis of *Baccharis* focusing on the subgenus *Tarchonanthoides* (Heiden et al., ined.), sampling 22 of the 23 species accepted in this taxon as circumscribed morphologically by Müller (2006), strongly supports the monophyly of *Baccharis* sensu lato, i.e. including *Baccharidastrum*, *Baccharidiopsis*, *Heterothalamus*, *Neomolina*, *Pingraea* and *Lanugothammus*. However, *Baccharis* subgen. *Tarchonanthoides* as proposed by Müller (2006), and consequently *Lanugothammus* as published by Deble (2012) is polyphyletic, since the characters used to circumscribe the new genus, such as the absence of the tufted indumentum common to most of the *Baccharis* species and other uncorrelated characters, as the pistilodium

sweeping hairs of equal length and pubescent cypselae, are not correlated and evolved more than once in *Baccharis*. Thus *Lanugothamnus* is regarded as a synonym of *Baccharis* and two new combinations for species published in *Lanugothamnus* with no name available in *Baccharis* are provided as follows.

BACCHARIS ANABELAE (Deble) G. Heiden, **comb. nov.** Basyonym: *Lanugothamnus anabelae* Deble (2012, p. 20). **TYPE. Brazil. Rio Grande do Sul:** São José dos Ausentes, Canion Monte Negro, 1000 m, 7 Nov 2005, ♀, Deble & Oliveira 4128 (holotype MBM; isotype SI).

BACCHARIS PLURICAPITULATA (Deble) G. Heiden, **comb. nov.** Basyonym: *Lanugothamnus pluricapitulatus* Deble (2012, p. 16). **TYPE. Brazil. Rio Grande do Sul:** Pinheiro Machado, Serra das Asperizas, 5 Mar 2008, Deble & Oliveira 8421 (holotype MBM; isotype: CTES)

ACKNOWLEDGEMENTS

The authors acknowledge FAPESP (processes 2010/00519-8, 2011/18385-0 and 2012/17911-3), IAPT Research Grants in Plant Systematics 2010, the Smithsonian Institution's 2011 Cuatrecasas Fellowship Award for financial support, and Guy Nesom for the review of the manuscript.

LITERATURE CITED

- Bremer, K. 1994. *Asteraceae: Cladistics & Classification*. Timber Press, Portland.
- Deble, L.P. 2012. Studies in Baccharidinae (Asteraceae: Astereae). I: *Lanugothamnus* a new genus from South America. *Balduinia* 37: 2–25.
- Heering, W. 1904. Die *Baccharis*-Arten des Hamburger Herbars. *Jahrb. Hamburg. Wissensch. Anst.* 21: 1–46.
- Heiden, G. and J.R. Pirani. 2012a. A synopsis and notes for *Baccharis* subgen. *Tarchonanthoides* (Asteraceae: Astereae). *Phytotaxa* 60: 41–49.
- Heiden, G. and J.R. Pirani. 2012b. *Baccharis napaea* (Asteraceae, Astereae): a new species of subgen. *Tarchonanthoides* sect. *Coridifoliae* from the subtropical highlands of southern Brazil. *Phytotaxa* 66: 49–54.
- Hellwig, F. 1993. The genera *Pingraea* Cassini and *Neomolina* Hellwig (Compositae-Astereae). *Candollea* 48: 203–219.
- Müller, J. 2006. Systematics of *Baccharis* (Compositae–Astereae) in Bolivia, including an overview of the genus. *Syst. Bot. Monogr.* 76: 1–341.
- Nesom, G.L. 1988. *Baccharis* sect. *Baccharidastrum* (Compositae: Astereae), including two monoecious and one dioecious species. *Phytologia* 65: 169–173.
- Nesom, G.L. 1990. Infrageneric taxonomy of North and Central American *Baccharis* (Asteraceae: Astereae). *Phytologia* 68: 40–46.